

WPS New England Generation, Inc.)	Departmental
Aroostook County)	Finding of Fact and Order
Limestone, Maine)	Air Emission License
A-862-71-A-N/T)	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

WPS New England Generation, Inc. (WPS) has requested to operate four diesel generators located at the Loring Commerce Center in Limestone, Maine. WPS will control the operation and maintenance of these units through a lease with the Loring Development Authority. These units are currently permitted for operation under Air Emissions License A-649-71-F-A/R. It is requested that a new air license be issued to WPS for the four diesel generators identified in the application. Also, there is a small heating boiler that will be included in this air emissions license.

B. Emission Equipment

WPS is authorized to operate the following air emission units:

Fuel Burning Equipment

Equipment ID	Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
Boiler #1	7240	1.9	#2 fuel oil, 0.35%	13.8

Diesel Units*

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
7240-1	10.4	#2 diesel, 0.05%	74.1
7240-2	10.4	#2 diesel, 0.05%	74.1
7240-3	11.2	#2 diesel, 0.05%	80
7240-5	26.6	#2 diesel, 0.05%	190

* The diesel engines are considered for emergency backup purposes only. The licensed requirements are at least as stringent as the Air Bureau's SICE guidance for emergency back-up generators.

C. Application Classification

A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

<u>Pollutant</u>	<u>Max. Future License (TPY)</u>	<u>Sig. Level</u>
PM	1.5	100
PM ₁₀	1.5	100
SO ₂	3.8	100
NO _x	21.0	100
CO	5.5	100
VOC	1.0	50

This source is determined to be a minor new source and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. Descriptions of the applicable requirements are provided below under the appropriate headings.

B. New Emission Units

BPT for new sources and modifications require a demonstration that emissions are receiving Best Available Control Technology (BACT) as defined in Chapter 100 of the Air Bureau Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

Oil-fired Boiler

The boiler, rated at 1.9 MMBtu/hr, will combust #2 fuel oil with a maximum fuel sulfur content not to exceed 0.35% by weight. The regulated pollutants emitted from the boilers are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Based on the relatively small size of the boiler and the quantity of pollutants that could potentially be emitted, it was determined by the Department that any additional pollution control devices would be economically unjustified. Therefore, BACT for the boiler includes the use of #2 fuel oil, with a maximum fuel sulfur content of 0.35% by weight. WPS shall limit #2 fuel oil use to 81,000 gallons per year, based on a 12-month rolling total.

Diesel Generators

WPS has requested to assume responsibility for the emergency backup diesel generators that were originally licensed at the Loring Development Authority in air emission license A-649-71-F-A/R. The diesel generators are not subject to the NSPS standards of 40 CFR Part 60 Subpart Dc due to the age of the generators, with the manufacture dates of the four units between 1947-1952.

During the course of preparing this new license, it was determined that calculation errors were made in the previous LDA application and subsequent licensing. Apparently, energy output for these units was used when calculating the MMBtu/hr design capacity. Because the conversion of energy from the fuel to electrical output is only about 30% efficient, the design input capacities of these diesel has increased significantly from what was licensed in LDA's Air Emission License A-649-71-F-A/R.

The limiting pollutant emitted from diesel generators is nitrogen oxides (NO_x). To maintain the diesel generators' facility-wide NO_x emissions to less than 20 tons per year, the maximum diesel fuel use shall be limited to 92,000 gallons/year. This corresponds approximately to an operational restriction of 220 hours per year for each unit. Due to the updated diesel design capacities, the short-term emissions have

changed from what was previously allowed in LDA's permit. The long term "ton per year" emissions have not changed and will continue to be based on the maximum allowable fuel use of 92,000 gallons per year. BACT for the diesel generators will be to keep records of fuel use, maintain the hours of operation to less than 220 hours per unit per year, restrict fuel use to a maximum of 92,000 gallons per year (12-month rolling total), and maintain a fuel sulfur limit of 0.05% by weight.

III. EMISSION STANDARDS

A. Oil-Fired Boiler Emission limits

WPS shall limit the total amount of #2 fuel oil fired in the boiler to 81,000 gallons per year, based on a 12-month rolling total. The #2 fuel oil combusted shall not have a fuel sulfur content greater than 0.35% by weight. Based on EPA's publication AP-42 "Compilation of Air Pollutant Emission Factors", and the data submitted by the applicant, the WPS fuel burning equipment shall have emissions limited as follows:

Pollutant	lb/MMBtu	lb/hour
PM	0.12	0.3
PM ₁₀	--	0.3
SO ₂	--	0.8
NO _x	--	0.4
CO	--	0.1
VOC	--	0.1

B. Diesel Generator Emission limits

WPS shall limit the total amount of diesel fuel fired in the emergency back-up units to less than 92,000 gallons per year. The diesel fuel combusted shall not have a fuel sulfur content greater than 0.05% by weight. Based on the EPA's publication AP-42 "Compilation of Air Pollutant Emission Factors", and the data submitted by the applicant, each of the LDA diesel generators shall have emissions limited as follows:

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<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Diesel Units 7240-1 & 7240-2 (lb/hour) each</u>	<u>Diesel Unit 7240-3 (lb/hour)</u>	<u>Diesel Unit 7240-4 (lb/hour)</u>
PM	0.12	1.2	1.3	3.2
PM ₁₀	-	1.2	1.3	3.2
SO ₂	-	3.0	3.2	7.7
NO _x	-	33.3	35.8	85.1
CO	-	8.8	9.5	22.6
VOC	-	1.6	1.7	4.0

C. Visible Emissions

Emission limits for the #2 oil-fired boiler and diesel generators are based on the expected maximum emissions after applying BACT. The limits comply with the emission standards in Chapter 101, Visible Emissions Regulation. Visible emissions from these units will not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

D. Facility Emissions and Fuel Use Caps

Total Allowable Annual Emissions for the Facility
 (used to calculate the annual license fee)

<u>Equipment</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
Oil-fired Boiler	0.7	0.7	2.0	1.1	0.2	0.1
Diesel Engines 7240-1,2,3,4	0.8	0.8	1.8	19.9	5.3	0.9
TOTALS (tons/year)	1.5	1.5	3.8	21.0	5.5	1.0

IV. AMBIENT AIR QUALITY ANALYSIS

According to Chapter 115 of the Maine Bureau of Air Quality Regulations, the level of air quality analysis and monitoring are determined on a case-by-case basis. Based on analyses for similar sources, the allowable emissions, and the location, ambient air quality standards including increment are not expected to be violated, therefore an ambient air impact analysis will not be required for this source at this time.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards, or increment standards either alone or in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-862-71-A-N/T subject the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.

- (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

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- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

- (16) WPS is authorized to operate the following oil-fired boiler:

Equipment ID	Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
Boiler #1	7240	1.9	#2 fuel oil, 0.35%	13.8

- (17) WPS is licensed to operate the following diesel generators:

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
7240-1	10.4	#2 diesel, 0.05%	74.1
7240-2	10.4	#2 diesel, 0.05%	74.1
7240-3	11.2	#2 diesel, 0.05%	80
7240-4	26.6	#2 diesel, 0.05%	190

- (18) WPS shall operate the diesel generators according to the following BACT restrictions:
- keep records of fuel use
 - maintain the hours of operation for each generator to less than 220 hours per year and keep a log of the amount of time.
 - restrict fuel use to a maximum of 92,000 gallons per year, based on a 12-month rolling total.
 - and maintain a fuel sulfur limit of 0.05% by weight and demonstrate this condition by keeping fuel receipts.
- (19) Visible emissions from each of the diesel units and #2 oil-fired boiler shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

- (20) WPS shall limit the #2 fuel oil combusted in the boiler to 81,000 gallons per year, with a maximum fuel sulfur content of 0.35% by weight, based on a 12-month rolling total. The total fuel use shall be logged and demonstrated by fuel receipts.
- (21) The maximum licensed allowed emission limits from the boiler shall be limited to the following:

Pollutant	lb/MMBtu	lb/hour
PM	0.12	0.3
PM ₁₀	--	0.3
SO ₂	--	0.8
NO _x	--	0.4
CO	--	0.1
VOC	--	0.1

- (22) The maximum licensed allowed emission limits from each of the diesel generators shall be limited to the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Diesel Units 7240-1 & 7240-2 (lb/hour) each</u>	<u>Diesel Unit 7240-3 (lb/hour)</u>	<u>Diesel Unit 7240-4 (lb/hour)</u>
PM	0.12	1.2	1.3	3.2
PM ₁₀	-	1.2	1.3	3.2
SO ₂	-	3.0	3.2	7.7
NO _x	-	33.3	35.8	85.1
CO	-	8.8	9.5	22.6
VOC	-	1.6	1.7	4.0

- (23) WPS shall pay the annual air emission license fee within 30 days of August 30th of each year. Pursuant to Title 38-353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3.

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(24) The term of this order shall be for five years from the date of signature.

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAHGER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 7, 2003

Date of application acceptance: March 17, 2003

Date filed with Board of Environmental Protection: _____

This order prepared by Edwin L. Cousins, Bureau of Air Quality